UNITED STATES PATENT AND TRADEMARK OFFICE

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10/733,808	12/10/2003	Chris A. Hopen	PA4407US	8851

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EXAMINER
JOO, JOSHUA

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/733,808	HOPEN ET AL.
	Examiner	Art Unit	
	JOSHUA JOO	2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *02 March 2009*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-12 and 14-23* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-12 and 14-23* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *2/14/08* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
        1. ☐ Certified copies of the priority documents have been received.
        2. ☐ Certified copies of the priority documents have been received in Application No. _____.
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1.   This Office action is in response to Applicant's communication filed on 03/02/2009.

Claims 1-12, 14-23 are pending for examination.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-12, 14-23 have been considered but are moot in

view of the new ground(s) of rejection. New ground(s) of rejection are necessitated by Applicant's

amendment.

Claim Rejections - 35 USC § 101

3.   Rejection of claims 1-19 under 35 U.S.C. 101 is withdrawn in view of Applicant's amendment.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-3, 5, 20-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

O'Neil et al. US Patent #6,128,279 (O'Neil hereinafter), in view of Wilding et al. US Publication

#2003/0212788 (Wilding hereinafter).

6.   As per claim 1, O'Neil teaches substantially the invention as claimed including a network

appliance, comprising:

at least one platform service stored in memory, the at least one platform server executable by a processing device (col. 5, lines 34-42. Module stored on memory. Processor. col. 4, line 65-col. 5, line 6. Server may be a WWW, CORBA, ORB, SMTP server.);

a service monitor stored in memory and executable by a processor to monitor a working status of the at least one platform service using interprocess communications (col. 6, lines 27-32. Determine load that the server is currently processing and whether operating capacity exceeds a predetermined level.); and

a load balancer stored in memory and executable by a processor to perform load balancing on received communications based on at least the working status of the at least one platform service (col. 6, lines 34-36. Determine that the load exceeds a predetermined level. col. 7, lines 24-31. Route the network request to another server.).

7.   O'Neil does not explicitly teach of the working status indicating that the at least one platform service is running, not running, or starting.

8.   Wilding teaches of monitoring a working status of a service, wherein the working status indicates that the at least one platform service is running or not running (Paragraphs 0035-0036. Monitor state of a service, the state including operable and not operable.).

9.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to monitor a working status indicating that a service is running or not running. The motivation for the suggested combination is that Wilding's teachings would improve O'Neil's teachings by providing information to ensure high availability of a service (Paragraphs 0023; 0028).

10.   As per claim 20, O'Neil teaches substantially the invention as claimed including a method of processing client communications to a network, comprising:

receiving a first client communications at a first network appliance hosting at least one first

platform service (col. 5, lines 43-44; col. 6, lines 12-15. Receive request. col. 5, lines 45. Process

request. col. 4, line 65-col. 5, line 6. Server may be a WWW, CORBA, ORB, SMTP server.);

employing a load balancer hosted by the first network appliance to direct the first client to the at

least one first platform service hosted by the first network appliance based on at least a working status of

the at least one first platform service (col. 6, lines 27-32. Determine load that the server is currently

processing and whether operating capacity exceeds a predetermined level. col. 7, lines 24-31. Route the

network request to another server.);

receiving a second client communication at the first network appliance (col. 6, lines 11-14.

Network request. It is inherent that a server may receive more than one request. col. 7, lines 40-47.

Requests.); and

employing the load balancer to direct the second client communications to a second platform

service hosted by a second network appliance based on at least the working status of the at least one first

platform service and a working status of the second platform service (col. 6, lines 50-57. Determine the

load of another server. col. 7, lines 4-20. Determine whether the another server is off-line or unable to

exchange information. col. 7, lines 24-31. Route request to the another server.).

11.   O'Neil does not explicitly teach of the working status indicating that the at least one platform

service is running, not running, or starting.

12.   Wilding teaches of monitoring a working status of a service, wherein the working status indicates

that the at least one platform service is running or not running (Paragraphs 0035-0036. Monitor state of a

service, the state including operable and not operable.).

13.   It would have been obvious to one of ordinary skill in the art at the time the invention was made

to combine the teachings to monitor a working status indicating that a service is running or not running.

The motivation for the suggested combination is that Wilding's teachings would improve O'Neil's

teachings by providing information to ensure high availability of a service (Paragraphs 0023; 0028)

14.   As per claim 2, O'Neil teaches the network appliance of claim 1, further comprising a backplane

interface through which the network appliance exchanges data with another device (col. 6, lines 36-43.

Modules in servers exchange information. fig. 3; col. 7, lines 47-50. Route request to another server.).

15.   As per claim 3, O'Neil teaches the network appliance of claim 2, wherein

        the another device hosts at least one second platform service stored in memory (col. 5, lines 37-

40, 44-45. Servers, e.g. server 7, that process requests. col. 4, line 65-col. 5, line 6. Server may be a

WWW, CORBA, ORB, SMTP server.), and

        the service monitor is executable to monitor a working status of the second platform service using

communications transmitted over the backplane (col. 6, lines 36-44. Determine load of other servers.

col. 7, lines 4-20. Determine whether the another server is off-line or unable to exchange information.).

16.   As per claim 5, O'Neil teaches the invention of claim 1, wherein the at least one platform service

is an access method service (col. 4, line 65-col. 5, lines 6. Servers may be a WEB, FTP, or SMTP server,

which would provide WEB, FTP, or SMTP services.).

17.   As per claim 21, O'Neil teaches the method of claim 20, further comprising: analyzing the first

client communications to determine if the first client communications includes association data indicating

that the first client communication is associated with the at least one first platform service; and

determining that the first client communication includes association data indicating that the first

communications is associated with the at least one first platform service. (col. 4, line 66-col. 5, line 6.

Servers may be WWW, CORBA, FTP, SMTP servers. col. 6, lines 12-15, 29-32. Request is processed, and server outputs a response. For the request to be properly processed and serviced, the request comprises information indicating what service is being requested or associated with the request, e.g. http get request, email transmission.)

18.   As per claim 23, O'Neil teaches the method of claim 20, further comprising:

        executing a load balancing algorithm to determine whether the second client communication should be directed to the second platform service (col. 6, lines 11-14. Network request. It is inherent that a server may receive more than one request. col. 7, lines 40-47. Requests. col. 6, lines 21-24, 36-41. Determine load and the loads of other servers.); and

        determining that the second client communications should be directed to the second platform service based upon results of the executed load balancing algorithm (col. 7, lines 1-3, 21-25. Determine load and online status to route requests. col. 7, lines 24-28, 45-50. Route request to another server.).

19.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil and Wilding, in view of Rao, US Patent #6,789,118 (Rao hereinafter).

20.   As per claim 4, O'Neil teaches monitoring a working status of the network appliance. O'Neil does not specifically teach the network appliance of claim 1, further comprising an interface monitor that monitors a working status of interfaces and connections employed by the network appliance.

21.   Rao teaches of a network appliance monitoring the working status of interfaces and connections by the network appliance (col. 8, lines 10-20, 24-29. Monitor the state of links and ports).

22.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to monitor the working status of interfaces and connections employed by the

network appliance. The motivation for the suggested combination is that Rao's teachings would improve the suggested system by allowing additional monitoring to determine whether a server can sufficiently service network requests. Rao's teachings would also provide an improvement to the suggested system by allowing recovery from detected equipment faults and links failures (col. 8, lines 17-23).

23.   Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil and Wilding, in view of Shanumgam et al. US Patent #7,032,022 (Shanumgam hereinafter).

24.   As per claim 6, O'Neil does not specifically teach the invention of claim 5, wherein the access method service is a private network service.

25.   Shanumgam teaches of a network device providing VPN service (fig. 1, 17; col. 4, lines 34-39; col. 5, lines 37-43; col. 14, lines 35-39).

26.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the server to provide VPN service. The motivation for the suggested combination is that O'Neil suggests desirability of allowing different services by teaching that the invention can be used with different types of servers. Furthermore, Shanumgam's teachings would provide an improvement to the suggested system by enabling the server to offer secure communications on a public network.

27.   As per claim 7, O'Neil does not specifically teach the invention of claim 5, wherein the access method is an extranet Web service.

28.   Shanumgam teaches of a network device providing extranet Web services (fig. 1; col. 4, lines 34-39; col. 5, lines 37-43; col. 6, lines 9-13. VPN service to connect to a public network).

29.   It would have been obvious to one of ordinary skill in the art at the time the invention was made

to combine the teachings for the server to provide extranet Web services.   The motivation for the

suggested combination is that O'Neil suggests desirability of allowing different services by teaching that

the invention can be used with different types of servers.   Furthermore, Shanumgam's teachings would

provide an improvement to the suggested system by enabling the server to offer secure communications

on a public network.

30.   Claims 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil and Wilding, in

view of Le et al. US Patent #6,145,089 (Le Hereinafter).

31.   As per claim 8, O'Neil teaches determining the working status of the at least one platform

service. O'Neil does not explicitly teach the network appliance recited in claim 1, further comprising a

node manager stored in memory and executable to determine the working status and provide the

determined working status of the at least one platform service to the service monitor.

32.   Le teaches of a server comprising a server manager that monitors the working status of a service

and indicates the working status to another manager (col. 7, lines 32-46; col. 8, lines 43-46. Monitor

functioning of the service or service group. Observe service failure.).

33.   It would have been obvious to one of ordinary skill in the art at the time the invention was made

to combine the teachings for the service monitor as taught by O'Neil to receive a working status of a

service determined and provided by a manager as taught by Le. The motivation for the suggested

combination is that Le's teachings would improve reliability of the suggested system by distributing the

task of determining a working status to a manager and allowing servers to fail over services to other

servers.

34.   Claims 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil and Wilding, in view of Jordan et al. US Patent #6,438,652 (Jordan hereinafter).

35.   As per claim 9, O'Neil does not specifically teach the network appliance of claim 1, further comprising a distributed cache service that caches information relating to at least one platform on another network appliance.

36.   Jordan teaches of a server comprising a distributed cache service, wherein the server caches information relating to another server (col. 4, lines 14-19; col. 7, lines 43-51. Send a copy of cached object p to a cache server.)

37.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the server to comprise a distributed cache service, wherein the server caches information relating to another server.   The motivation for the suggested combination is that Jordan's teachings would improve the suggested system by providing distributed load balancing of cached information, and retrieving content from the cache would reduce the time required to service requests.

38.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil, Wilding, and Jordan, in view of Kakemizu et al., US Patent #7,068,640 (Kakemizu hereinafter).

39.   As per claim 10, O'Neil teaches that the at least one platform service is an access method service (col. 4, line 65-col. 5, lines 6. Servers may be a WEB, FTP, or SMTP server, which would provide WEB, FTP, or SMTP services.). O'Neil does not specifically teach the invention of claim 9, wherein the information cached includes authentication information and encryption key information for encryption sessions hosted by the access method service.

40.   Kakemizu teaches of an ISP (server) providing VPN services, wherein the server comprises cached information that includes authentication information and encryption key information for

encryption sessions hosted by the service (fig 7. col. 7, line 58-col. 8, line 17. VPN information cache. VPN information profile comprises identifiers, authentication, encryption keys.).

41.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the cached information as taught by the suggested system to include authentication information and encryption key information for encryption sessions hosted by the service as taught by Kakemizu. The motivation for the suggested combination is that O'Neil suggests desirability of allowing different services by teaching that the invention can be used with different types of servers. Furthermore, Kakemizu's teachings would improve the suggested system by providing secure network communications and reduce the time required to process requests.

42.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil and Wilding, in view of Kakemizu et al., US Patent #7,068,640 (Kakemizu hereinafter).

43.   As per claim 22, O'Neil does not specifically teach the method of claim 21, wherein the association data is a session identifier identifying an encryption session maintained by the at least one first platform service.

44.   Kakemizu teaches of providing a session id identify an encryption session maintained by a service provider (col. 7, line 58-col. 8, line 17).

45.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to implement a server providing a VPN service and provide a session id to identify an encryption session maintained by the server The motivation for the suggested combination is that O'Neil teaches that the invention can be used with different types of servers, and Kakemizu's teachings would improve the suggested system by providing secure network communications and allowing the server to retrieve a client VPN profile to set a VPN path.

46.   Claims 11-12, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil,

in view of Wilding and Brendel et al. US Patent #5,774,660 (Brendel hereinafter).

47.   As per claim 11, O'Neil teaches substantially the invention as claimed including a system

comprising:

        a first network appliance having: at least one first platform service stored in memory (col. 5, lines

34-42. Module stored on memory. Processor), a service monitor stored in memory and executable to

monitor a working status of the at least one first platform service using interprocess communications (col.

6, lines 27-32. Determine load, operating capacity, and whether the a predetermined level is exceed.);

and

        a first load balancer stored in memory and executable to perform load balancing on

communications received by the first network appliance based on at least the working status of the at least

one first platform service, the working status indicating whether the at least one platform service is

running (col. 6, lines 27-32. Determine load that the server is currently processing and whether operating

capacity exceeds a predetermined level. col. 7, lines 24-31. Route the network request to another

server.); and

        a second network appliance having: at least one second platform service stored in memory (col. 5,

lines 37-40, 44-45. Servers, e.g. server 7, that process requests.) and a second load balancer stored in

memory and executable to perform load balancing on communications received by the second network

appliance (col. 5, lines 37-47. Servers include load balancing modules, e.g. module 17. Determine

whether to process the request.).

48.   O'Neil does not explicitly teach of the working status indicating that the at least one platform

service is running, not running, or starting, wherein the first network appliance is configured to receive all

client communications to the network unless the first load balancer fails, and the second network appliance is configured to receive all client communications to the network if the first load balancer fails.

49.   Wilding teaches of monitoring a working status of a service, wherein the working status indicates that the at least one platform service is running or not running (Paragraphs 003—0036. Monitor status of a service, the state including operable and not operable.).

50.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to monitoring a working status indicating that a service is running or not running. The motivation for the suggested combination is that Wilding's teachings would improve O'Neil's teachings by providing information to ensure high availability of a service (Paragraphs 0023; 0028).

51.   Brendel teaches of a first network appliance configured to receive all packets to the network unless a first load balancer fails, and a second network appliance configured to receive all packets to the network if the first load balancer process fails (claim 14; col. 19, lines 9-14. Secondary load balancer receives all packets when primary load balancer fails.).

52.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the first network appliance comprising a load balancer as taught by O'Neil to receive all packets to the network and for a second appliance device, such as the second server comprising a load balancer in O'Neil, to receive all packets to the network if the first load balancer fails. The motivation for the suggested combination is that Brendel's teachings would improve the reliability of the suggested system by providing a backup service that allows continued load balancing of communications in the network and thus reducing the failure of services.

53.   As per claim 12, O'Neil teaches the network of claim 11, wherein the second network appliance

further includes a second service monitor stored in memory and executable to monitor a working status of

the at least one second platform using interprocess communications (col. 5, lines 37-47. Servers comprise

load balancing modules. Module includes process steps to determine whether to process a request. col. 6,

lines 18-29. Determine the load, operating capacity, and whether load exceeds a predetermined level.).

54.   As per claim 14, O'Neil teaches the invention of claim 11, wherein the at least one platform

service is an access method service (col. 4, line 65-col. 5, lines 6. Servers may be a WEB, FTP, or SMTP

server, which would provide WEB, FTP, or SMTP services.).

55.   As per claim 17, O'Neil teaches the network of claim 11, wherein the at least second platform

service is an access method service (col. 4, line 65-col. 5, lines 6. Servers may be a server that provides

WEB, FTP, SMTP services.).

56.   Claims 15-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil,

Wilding, and Brendel, in view of Shanumgam.

57.   As per claim 15, O'Neil does not specifically teach the invention of claim 14, wherein the access

method service is a private network service.

58.   Shanumgam teaches of a network device providing VPN service (fig. 1, 17; col. 4, lines 34-39;

col. 5, lines 37-43; col. 14, lines 35-39).

59.   It would have been obvious to one of ordinary skill in the art at the time the invention was made

to combine the teachings for the server to provide VPN service. The motivation for the suggested

combination is that O'Neil suggests desirability of allowing different services by teaching that the

invention can be used with different types of servers. Furthermore, Shanumgam's teachings would improve the suggested system by enabling to server to provide secure communications on a public network.

60.   As per claim 16, O'Neil does not specifically teach the invention of claim 14, wherein the access method is an extranet Web service.

61.   Shanumgam teaches of a network device providing extranet Web services (fig. 1; col. 4, lines 34-39; col. 5, lines 37-43; col. 6, lines 9-13. VPN service to connect to a public network).

62.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the server to provide extranet Web services. The motivation for the suggested combination is that O'Neil suggests desirability of allowing different services by teaching that the invention can be used with different types of servers. Furthermore, Shanumgam's teachings would improve the suggested system by enabling to server to provide secure communications on a public network.

63.   As per claim 18, O'Neil does not specifically teach the network in claim 17, wherein the access method service is a private network service.

64.   Shanumgam teaches of a network device providing VPN service (fig. 1, 17; col. 4, lines 34-39; col. 5, lines 37-43; col. 14, lines 35-39).

65.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of O'Neil and Shanumgam for the server to provide VPN service. The motivation for the suggested combination is that O'Neil suggests desirability of allowing different services by teaching that the invention can be used with different types of servers. Furthermore,

Shanumgam's teachings would improve the suggested system by enabling to server to provide secure communications on a public network.

66.   As per claim 19, O'Neil does not specifically teach the network in claim 17, wherein the access method is an extranet Web service.

67.   Shanumgam teaches of a network device providing extranet Web services (fig. 1; col. 4, lines 34-39; col. 5, lines 37-43; col. 6, lines 9-13. VPN service to connect to a public network).

68.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of O'Neil and Shanumgam for the server to provide extranet Web services. The motivation for the suggested combination is that O'Neil suggests desirability of allowing different services by teaching that the invention can be used with different types of servers. Furthermore, Shanumgam's teachings would improve the suggested system by enabling to server to provide secure communications on a public network.

Conclusion

69.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

70.   A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX

MONTHS from the date of this final action.

71.   Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be

reached on Monday to Friday 7 to 4.

72.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this

application or proceeding is assigned is 571-273-8300.

73.   Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/J. J./
Examiner, Art Unit 2454
/Nathan J. Flynn/

Supervisory Patent Examiner, Art Unit 2454